
Rule DAS385: Applications potentially causing worst shared DASD conflicts

Finding: CPExpert lists the applications that might cause shared DASD conflicts during the RMF measurement intervals with the worst performance. |

Impact: This finding is used to assess whether sharing DASD between systems or MVS images caused performance problems, and to identify specific applications that might cause the worst conflicts. |

Logic flow: The following rules cause this rule to be invoked:
DAS100: Volume with the worst overall performance
DAS300: Shared DASD conflicts caused performance problems

This finding is produced only if the CPExpert modification to MXG or MICS is installed, so that SMF Type 30(DD) information is available.

Discussion: If CPExpert determines that there may be DASD conflicts caused by sharing DASD between systems of MVS images, and if the CPExpert modification to MXG or MICS is installed to collect application/device data, CPExpert performs further analysis. This analysis is described in Rule DAS380.

CPExpert further processes the information selected from the DASD30DD data set, to select job steps that referenced the device with the worst performance, **during the RMF measurement interval in which the device had the worst performance**. CPExpert includes only references for time intervals when earlier analysis had concluded that shared DASD conflicts might cause a performance problem. |

CPExpert produces a list of applications (listed by SMF Type 30 interval start and end times), ranked descendingly by the access to the device with the worst performance. The SMF Type 30 interval data are prorated, if necessary, to reflect the approximate number of I/O operations during the worst RMF interval. Please refer to Section 5 (Chapter 2.1) for a discussion of prorating issues. |

As described in Section 5, the SMF Type 30(Interval) information might not be synchronized with the SMF Type 70(series) information. In this case, the identification of applications may not correctly identify the applications with the most I/O operations to the volume. However, if the analysis produces the same results after analyzing more than one day's measurement data, you can be more comfortable that the applications are correctly identified. |

In some cases, the Type 30(Interval) data does not reflect all I/O activity to a device. This normally is caused by the Interval records not being written for all address spaces (such as started tasks running in SYSSTC service class). Consequently, you should use the output from DAS180 with care.

Suggestion: Rule DAS385 is provided so you can identify the applications potentially causing the worst shared DASD conflicts. You may wish to take the following actions:

- Reschedule the applications that cause shared DASD conflicts to a different processing time. The shared DASD conflicts may be eliminated or reduced if the applications can be rescheduled.
- Review the data sets on the volume to determine whether the data sets can be moved to other shared volumes (or to non-shared volumes). The shared DASD conflicts may be reduced or eliminated if the **data sets** are not required by systems sharing the volumes.
- Modify the applications causing shared DASD conflicts to reduce or eliminate their use of the data on the shared volume.